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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/972,386	10/05/2001	Michael Loren Lamb	SJ09-2001-0037	5127

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EXAMINER
WU, QING YUAN

ART UNIT	PAPER NUMBER
2194	

DATE MAILED: 10/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/972,386	LAMB ET AL.
	Examiner	Art Unit	
	Qing-Yuan Wu	2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *8/16/05*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

U.S. Patent and Trademark Office

PTOL-326 (Rev. 7-05)   Office Action Summary   Part of Paper No./Mail Date 10252005

DETAILED ACTION

1.   Claims 1-26 are pending in the application.

Claim Objections

2.   Claims 1, 10, 23 and 25 are objected to because of the following informalities:

"possessor" in claim 1 line 16, claim 10 line 22, claims 23 and 25 line 12 should read - -

processor- -. Appropriate correction is required.

Claim Rejections - 35 USC § 101

3.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or
> any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and
> requirements of this title.

4.   Claims 25-26 are rejected under 35 U.S.C. 101 because the claimed invention is directed

to non-statutory subject matter.

5.   Claims 25-26 are rejected under 35 U.S.C. 101 because the claimed invention is directed

to non-statutory subject matter because they are lacking utilities. (i.e. the computer program must

be stored in a computer readable medium, and executed by a computer element to perform

control of a technical procedure).

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

7.   Claims 1-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (U.S.

PG Pub 20020069245), in view of Blumenau et al (hereafter Blumenau) (U.S. Patent 6,810,396).

8.   Kim and Blumenau were cited in the last office action.

9.   As to claim 1, Kim teaches the invention substantially as claimed including a storage area

network (SAN) comprising one or more digital data processors in communication with one or

more storage devices, wherein at least a selected one of the digital data processors operates under

an operating system having

a port driver defining a software interface between a class driver and an adapter to which

one or more of the storage devices are coupled [pg. 7, paragraphs 107-108, and paragraph 110,

lines 7-10; Pg. 10-11, paragraphs 135-143],

the class driver for claiming one or more of the storage devices for access by the

operating system and any applications programs executing therein by invoking the port driver to

which the selected digital data processor is coupled [pg. 4, paragraph 76; pg. 8, paragraphs 119-

120; pg. 10, paragraph 134; Fig. 23], the class driver issuing a claim request to the port driver for

a selected one of the storage devices [pg. 2, paragraph 45; pg. 11, paragraph 143], the port driver

issuing a response to the class driver [pg. 7, paragraph 116, lines 7-12].

10.   Kim does not specifically teach a filter in communication with the port driver and the

class driver, the filter intervening to block claiming of one or more of the storage devices by the

class driver, and determining whether the selected storage device has been assigned to the

selected digital data processor. However, Kim disclosed a filter program for access control,

access share, and access right transfer, etc. [pg, 6, paragraph 94] and a class driver in

communication with a port driver for passing requests from host to storage device [pg. 11,

paragraph 143]. In addition, Blumenau teaches a filter/adapter unit that performs filtering

function to ensure that only hosts with privileges are able to access the volume and filtering out

non-privileged requests [Blumenau, col. 4, line 58-col. 5, line 16].

11.   It would have been obvious to one of an ordinary skill in the art at the time the invention

was made, to have combined the teaching Kim with the teaching of Blumenau because both Kim

and Blumenau teaches network storage access [pg. 1, paragraph 7; Blumenau, col. 1, lines 25-45]

and because the teaching of Blumenau can further enhanced the teaching of Kim by providing

addition functionalities to Kim's filter program [Blumenau, col. 4, line 58-col. 5, line 16].

12.   Furthermore, Kim and Blumenau does not specifically teach the filter intercepting the

response from the port driver, and, based on the determination, determining whether to allow the

response from the port driver to pass to the class driver. However, Kim disclosed the port driver

issuing a response to the class driver [pg. 7, paragraph 116, lines 7-12], and Blumenau disclosed

allowing only requests from HBAs that are assigned to selected volumes to have access to those

volumes of the storage devices [Blumenau, col. 4, line 58-col. 5, line 16]. It would have been

obvious to one of an ordinary skill in the art at the time the invention was made, to have prohibit

communication between the port driver and class driver which implicitly prohibits (i.e. storage

device not assigned to the selected digital data processor) the access to the storage device as

being considered by Kim and Blumenau (i.e. given the scenario in which conventional storage

system grant all request accesses [Blumenau, col. 1, lines 26-45; col. 5, lines 13-14]).

13.   As to claim 2, Kim as modified teaches the invention substantially as claimed including

wherein the filter blocks claiming of a selected storage device by returning a failure code to the

class driver in response to its invocation of the port driver for purposes of claiming that storage

device [Blumenau, col. 16, lines 41-44]. Kim as modified does not specifically teach wherein

the operating system is a Windows NT operating system, however Kim as modified disclosed

that a host may run in UNIX or Windows family of operating systems [pg. 1, paragraph 16, lines

7-8]. It would have been obvious to one of an ordinary skill in the art at the time the invention

was made, to have recognized that Windows family of operating systems would have include

Windows NT.

14.   As to claim 4, Kim as modified teaches the invention substantially as claimed including

comprising an element in communication with the filter and transmitting thereto identifiers of

one or more storage devices for which claiming is to be any of blocked and not blocked

[Blumenau, col. 2, lines 18-22; col. 4, lines 34-38].

15.   As to claim 5, this claim is rejected for the same reason as claim 4 above.

16.   As to claim 6, Kim as modified teaches the invention substantially as claimed including

wherein the element transmits to the filter identifiers of one or more storage devices for which

claiming is not to be blocked, the filter intervening to block claiming of fiber channel storage

devices other than those identified for which claiming is not to be blocked [Blumenau col. 2,

lines 18-22; col. 4, line 34-col. 5, line 16].

17.   As to claims 7-8, Kim as modified does not specifically teach wherein the class driver

creates a disk object upon successfully claiming a storage device. However, Kim as modified

disclosed a bus driver and port driver creating device objects in which the device objects help

software manage hardware [pg. 7, paragraph 108, lines 6-9 and paragraph 112, lines 1-9; pg. 10,

paragraph 135; Fig. 22]. It would have been obvious to one of an ordinary skill in the art at the

time the invention was made, to have recognized the advantage of creating software objects and

to better manage the storage devices using these objects by a software as been considered by

Kim as modified.

18.   As to claim 9, this claim is rejected for the same reason as claims 1 and 6. In addition,

Kim as modified does not specifically teach the filter responds to identification of a storage

device for which storage device claiming is not to be blocked and for which storage device

claiming had previously been blocked by invoking the port driver for purposes of claiming the

one or more storage devices identified by the port driver as being coupled to the selected digital

data processor. However, Kim as modified disclosed providing access to privileged requests and

blocking out non-privileged request as indicated by information in a volume configuration

management database, and a management console for updating the information [Blumenau col.

2, lines 18-22; col. 4, line 34-col. 5, line 16]. It would have been obvious to one of an ordinary

skill in the art at the time the invention was made, to have recognized that the status of the

storage devices could be updated as been considered by Kim as modified.

19.   As to claim 10, this claim is rejected for the same reason as claims 1, 2 and 4 above.

20.   As to claim 11, this claim is rejected for the same reason as claims 1 and 10 above.

21.   As to claim 12, Kim as modified does not specifically teach wherein the manager digital

data processor is coupled to the selected digital data processors by a second network. However,

Kim as modified disclosed a management console having access to update information of the

volume configuration management database [Blumenau col. 2, lines 18-22; col. 4, line 34-col. 5,

line 16]. It would have been obvious to one of an ordinary skill in the art at the time the

invention was made, to have recognized that the manager digital processor could communicate

and update information/criteria for filtering regardless of its location.

22.   As to claim 13, this claim is rejected for the same reason as claim 12 above. In addition,

Kim as modified teaches wherein the first network comprises fiber channel [Blumenau, 14, Fig.

1].

23.   As to claim 14, Kim as modified does not specifically teach a graphical user interface.

However, Kim as modified disclosed system administrator/a management console having access

to update information of the volume configuration management database [Blumenau col. 2, lines

18-22; col. 4, line 34-col. 5, line 16]. It would have been obvious to one of an ordinary skill in

the art at the time the invention was made, to have recognized that an interface has to be present

in order for the information to be enter by the system administrator or by the system

administrator through the use of the management console.

24.   As to claim 15, this claim is rejected for the same reason as claims 1, 2, 6 and 10 above.

In addition, Kim as modified does not specifically teach wherein the filter blocks the claim

request to prevent the class driver from creating a device object for the selected storage device.

However, Kim disclosed the port driver issuing a response to the class driver [pg. 7, paragraph

116, lines 7-12], and Blumenau disclosed allowing only requests from HBAs that are assigned to

selected volumes to have access to those volumes of the storage devices [Blumenau, col. 4, line

58-col. 5, line 16]. It would have been obvious to one of an ordinary skill in the art at the time

the invention was made, to have prohibit communication between the port driver and class driver

which implicitly prohibits the access (i.e. when the storage device is not assigned to the selected

digital data processor) to the storage device as being considered by Kim and Blumenau (i.e.

given the scenario in which conventional storage system grant all request accesses [Blumenau,

col. 1, lines 26-45; col. 5, lines 13-14]).

25.   As to claims 16-19, these claims are rejected for the same reason as claims 11-14 above.

26.   As to claim 20, this claim is rejected for the same reason as claims 1, 2, 4, and 15 above.

Kim as modified does not specifically teach a plug-n-play manager that invokes the port driver to

populate a data structure with data pertaining to one or more storage devices that are coupled to

the adapter by issuing a request packet, and the filter blocking access to selected ones of the

storage devices by determining which ones of the storage devices are to be masked and removing

from the data structure at least selected data pertaining those determined storage devices.

However, Kim as modified disclosed generating a filter table with data pertaining to one or more

storage devices that are coupled the adapter [Blumenau, col. 4, lines 60-62], and providing

access to privileged requests and blocking out non-privileged request as indicated by information

in a volume configuration management database, setting and unsetting a bit mask to indicate

accessibility of a storage devices [Blumenau col. 2, lines 18-22; col. 4, line 34-col. 5, line 16]. It

would have been obvious to one of an ordinary skill in the art at the time the invention was

made, to have include the invoking of the port driver because the port driver is bridge between

the class driver and storage devices and responsible for adding and removing the storage devices

(i.e. create/remove device object) [pgs. 10-11, paragraphs 134-141], and controlling the access of

the storage devices by indicating the availability/accessibility of the storage devices.

27.   As to claim 21, this claim is rejected for the same reason as claims 9 and 20 above.

28.   As to claim 22, this claim is rejected for the same reason as claims 1, 15 and 20 above.

29.   As to claim 3, Kim as modified teaches the invention substantially as claimed including wherein the operating system is a Windows 2000 [pg. 6, paragraph 104], and the filter blocks claiming of a selected storage device by returning a failure code in response to such request [Blumenau, col. 6, lines 41-44].

30.   As to claim 23, this claim is rejected for the same reason as claim 1 above.

31.   As to claim 24, this claim is rejected for the same reason as claims 1, 15 and 20 above.

32.   As to claim 25, this claim is rejected for the same reason as claim 1 above.

33.   As to claim 26, this claim is rejected for the same reason as claims 1, 15 and 20 above.

34.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

        U.S. Patent No. 6,671,820 to Kelman teaches logical unit number in a storage area network environment.

Response to Arguments

35.   Applicant's arguments filed 8/16/05 have been fully considered but are moot in view of

the new ground(s) of rejection.

36.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR

1.136(a) will be calculated from the mailing date of the advisory action. In no event, however,

will the statutory period for reply expire later than SIX MONTHS from the date of this final

action.

37.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Qing-Yuan Wu whose telephone number is (571) 272-3776. The

examiner can normally be reached on 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, William Thomson can be reached on (571) 272-3718. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Qing-Yuan Wu

Examiner

Art Unit 2194